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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,422	07/30/2003	Andrew L. Adamiecki	Adamiecki 2-6	7836

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EXAMINER

JEAN PIERRE, PEGUY

ART UNIT PAPER NUMBER

2819

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/630,422	<b>Applicant(s)</b> ADAMIECKI ET AL. <span style="float: right;">(M)</span>	
	<b>Examiner</b> Peguy JeanPierre	<b>Art Unit</b> 2819	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 4/7/2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-3, 5-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murray (GB2217957) in view of Patel (USP 5,525,983).

4. Claims 1-3, 5-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Murray et al. (GB 2217957).

Murray et al. disclose In Figure 1, a method of converting analog duo-binary signals to binary in a communication medium, by comparing (CP1, CP2) the duo-binary signals to first (X) and second (Y) reference voltages. A third binary signal is generated through an

exclusive-or-gate (G) circuit based on the comparison result. The logical values (1 or 0) of the first and second binary signals are generated based on the comparison result of the analog input (Z) and the reference voltages and it is inherent that the logical values on the binary signals are determined on whether the reference voltage is higher, or lower or equal than the duo-binary input signal. Figures 3-5 illustrate different connections of the reference voltages and the analog input signal to the positive and negative inputs of the comparators (CP1, CP2). The reference voltage as well known in the art can be selected based on particular criteria (in this case it is not based on peak detection in the input signal). The connections of the voltages will inherently affect the logical values of the binary signals generated by the comparator. It is to be noted both comparators receive the same analog signal having the same amplitude and the bit rate of the input signal is proportional to the bit rate of the comparators. Like any converter/encoder, the duo-binary to binary data converter is an electrical device that can be used in any communication device. Murray disclose essential features of the claimed invention as set forth above except for a splitter that splits the duo-binary signal into a first copy and a second copy before being inputted into the comparators, respectively.

Patel et al. disclose in Figure 1, a duo-binary to binary encoder circuit that comprises a data splitter (15) that splits the duo-binary signal before its conversion to binary (see col. 5, lines 42-53). The system of Patel can handle high speed data transmission (see col. 1, lines 9-11 and 15-33). By splitting the signal the ternary signal the bandwidth of the splitter decreases so is the bandwidth of all the circuits namely logic gates and

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comparators etc... that are involved in the conversion process. The system of Patel et al. is designed to maintain DC balance in the transmitted signal. Therefore, it would have been obvious to one having ordinary skill in the art to apply the teachings by Patel et al. of splitting the ternary signals before its conversion to binary in the converter of Murray to provide a more stable converter, less susceptible to interference or other forms of disturbances, and capable to operate at a higher frequency.

### ***Response to Arguments***

5. Applicant's arguments filed on 4/7/2005 have been fully considered but they are not persuasive.

Applicant argues that the Patel reference teaches a binary to duo-binary converter. The Examiner agrees. However, the Patel reference teaches also the conversion of duo-binary or ternary data to binary and further comprises a splitter that splits the duobinary data (see rejection). It is the second part of the reference (the decoding portion) that has been applied to the claim language.

In addition, the Patel reference is used only to meet the recited limitation of a splitter. Hence the combination of Murray and Patel is proper and consequently, the Examiner maintains the rejection of the claims.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peguy JeanPierre whose telephone number is (571) 272-1803/272-1803. The examiner fax phone number is (571) 273-1803.

  
Peguy JeanPierre  
Primary Examiner